



AMENDMENTS TO THE CLAIMS

Claims 1-22. (Canceled)

23. (New) An oxide fuel cell comprising:

a fuel electrode layer and an oxidant electrode layer on opposite surfaces of a solid electrolyte layer, respectively;

a fuel electrode current collector and an oxidant electrode current collector positioned outside said fuel electrode layer and said oxidant electrode layer, respectively; and

a first separator and a second separator positioned outside said fuel electrode current collector and said oxidant electrode current collector, respectively,

wherein said first separator includes a first thin metal plate laminated on a second thin metal plate,

(i) with said first thin metal plate having a first gas discharge opening for discharging introduced fuel gas from a first internal part of said first separator, and also having second gas discharge openings positioned outwardly of said first gas discharge opening for discharging the introduced fuel gas from a second internal part of said first separator, for thereby allowing the introduced fuel gas, when discharged from said first gas discharge opening and from said second gas discharge openings, to flow through said fuel electrode current collector so as to reach said fuel electrode layer, and

(ii) with said second thin metal plate having an indented surface such that channels, defined by said indented surface, face said first thin metal plate and are in fluid communication with said first gas discharge opening and said second gas discharge openings so as to guide the introduced fuel gas to said first gas discharge opening and said second gas discharge openings, and

wherein said second separator includes a first thin metal plate laminated on a second thin metal plate,

(i) with said first thin metal plate having a first gas discharge opening for discharging introduced oxidant gas from a first internal part of said second separator, and also having second gas discharge openings positioned outwardly of said first gas discharge opening

for discharging the introduced oxidant gas from a second internal part of said second separator, for thereby allowing the introduced oxidant gas, when discharged from said first gas discharge opening and from said second gas discharge openings, to flow through said oxidant electrode current collector so as to reach said oxidant electrode layer, and

(ii) with said second thin metal plate having an indented surface such that channels, defined by said indented surface, face said first thin metal plate and are in fluid communication with said first gas discharge opening and said second gas discharge openings so as to guide the introduced oxidant gas to said first gas discharge opening and said second gas discharge openings.

24. (New) The oxide fuel cell according to claim 23, wherein

said first gas discharge opening of said first separator is centrally arranged such that said first gas discharge opening is for discharging the introduced fuel gas from a central internal part of said first separator, and said second gas discharge openings of said first separator are circularly arranged around said first gas discharge opening such that said second gas discharge openings are for discharging the introduced fuel gas from an internal part of said first separator that surrounds the central internal part of said first separator, and

said first gas discharge opening of said second separator is centrally arranged such that said first gas discharge opening is for discharging the introduced oxidant gas from a central internal part of said second separator, and said second gas discharge openings of said second separator are circularly arranged around said first gas discharge opening such that said second gas discharge openings are for discharging the introduced oxidant gas from an internal part of said second separator that surrounds the central internal part of said second separator.

25. (New) The oxide fuel cell according to claim 24, wherein
said second thin metal plate of said first separator is provided by plastically deforming
sheet metal, and
said second thin metal plate of said second separator is provided by plastically deforming
sheet metal.

26. (New) The oxide fuel cell according to claim 25, wherein
said first separator further includes a third thin metal plate laminated on said second thin
metal plate of said first separator such said second thin metal plate of said first separator is
between said first and third thin metal plates of said first separator, and
said second separator further includes a third thin metal plate laminated on said second
thin metal plate of said second separator such said second thin metal plate of said second
separator is between said first and third thin metal plates of said second separator.

27. (New) The oxide fuel cell according to claim 24, wherein
said second thin metal plate of said first separator is provided by embossing a metal plate,
and
said second thin metal plate of said second separator is provided by embossing a metal
plate.

28. (New) The oxide fuel cell according to claim 27, wherein
said first separator further includes a third thin metal plate laminated on said second thin
metal plate of said first separator such said second thin metal plate of said first separator is
between said first and third thin metal plates of said first separator, and
said second separator further includes a third thin metal plate laminated on said second
thin metal plate of said second separator such said second thin metal plate of said second
separator is between said first and third thin metal plates of said second separator.

29. (New) The oxide fuel cell according to claim 24, wherein
said first separator further includes a third thin metal plate laminated on said second thin metal plate of said first separator such said second thin metal plate of said first separator is between said first and third thin metal plates of said first separator, and
said second separator further includes a third thin metal plate laminated on said second thin metal plate of said second separator such said second thin metal plate of said second separator is between said first and third thin metal plates of said second separator.

30. (New) The oxide fuel cell according to claim 23, wherein
said second thin metal plate of said first separator is provided by plastically deforming sheet metal, and
said second thin metal plate of said second separator is provided by plastically deforming sheet metal.

31. (New) The oxide fuel cell according to claim 23, wherein
said second thin metal plate of said first separator is provided by embossing a metal plate, and
said second thin metal plate of said second separator is provided by embossing a metal plate.

32. (New) The oxide fuel cell according to claim 23, wherein
said first separator further includes a third thin metal plate laminated on said second thin metal plate of said first separator such said second thin metal plate of said first separator is between said first and third thin metal plates of said first separator, and
said second separator further includes a third thin metal plate laminated on said second thin metal plate of said second separator such said second thin metal plate of said second separator is between said first and third thin metal plates of said second separator.

33. (New) A separator for use in an oxide fuel cell which includes an electrode layer on a surface of a solid electrolyte layer, and a current collector positioned outside the electrode layer, said separator comprising:

a first thin metal plate laminated on a second thin metal plate,

(i) with said first thin metal plate having a first gas discharge opening for discharging introduced gas from a first internal part of said separator, and also having second gas discharge openings positioned outwardly of said first gas discharge opening for discharging the introduced gas from a second internal part of said separator, for thereby allowing the introduced gas, when discharged from said first gas discharge opening and from said second gas discharge openings, to flow through the current collector so as to reach the electrode layer, and

(ii) with said second thin metal plate having an indented surface such that channels, defined by said indented surface, face said first thin metal plate and are in fluid communication with said first gas discharge opening and said second gas discharge openings so as to guide the introduced gas to said first gas discharge opening and said second gas discharge openings.

34. (New) The separator according to claim 33, wherein

said first gas discharge opening is centrally arranged such that said first gas discharge opening is for discharging the introduced gas from a central internal part of said separator, and said second gas discharge openings are circularly arranged around said first gas discharge opening such that said second gas discharge openings are for discharging the introduced gas from an internal part of said separator that surrounds the central internal part of said separator.

35. (New) The separator according to claim 34, wherein

said second thin metal plate is provided by plastically deforming sheet metal.

36. (New) The separator according to claim 35, further comprising:
a third thin metal plate laminated on said second thin metal plate such said second thin metal plate is between said first and third thin metal plates.

37. (New) The separator according to claim 34, wherein
said second thin metal plate is provided by embossing a metal plate.

38. (New) The separator according to claim 37, further comprising:
a third thin metal plate laminated on said second thin metal plate such said second thin metal plate is between said first and third thin metal plates.

39. (New) The separator according to claim 34, further comprising:
a third thin metal plate laminated on said second thin metal plate such said second thin metal plate is between said first and third thin metal plates.

40. (New) The separator according to claim 33, wherein
said second thin metal plate is provided by plastically deforming sheet metal.

41. (New) The separator according to claim 33, wherein
said second thin metal plate is provided by embossing a metal plate.

42. (New) The separator according to claim 33, further comprising:
a third thin metal plate laminated on said second thin metal plate such said second thin metal plate is between said first and third thin metal plates.